

REMARKS

Claims 1-17 are active. This amendment amends claims 1, 6, 10, 11, 13, 15-17, cancels claims 3, 12 and 14, and adds claims 18 and 19.

Claims 1, 11, 13 and 17 have been amended to correct the language in a manner to overcome the §112 rejection.

Claims 1 and 3-10 stand rejected as anticipated by Scudder, U.S. 5,938,373.

Claim 1 has been amended to set forth that the screening unit is within the trench. Also, the subject matter of claim 3 is added to claim 1 and combined to point out that the material swept from the trench wall falls into the trench and onto the screen member in the trench to be deposited on the one or more utilities.

The Scudder apparatus operates outside and above the limits of the trench, and the movable unit runs alongside the trench. The apparatus of the subject invention operates within the limits of the trench. Therefore, it can operate in a much narrower footprint of the overall trenching operation.

In Scudder, the screening member 36, 38 is elevated above the trench wall. The plow 18 sweeps material onto a conveyor 24 which conveys the material up to the screening member 36. That is, the Scudder apparatus must elevate the material in order for it to be processed. This requires a mechanical conveyor to transport the material vertically. The movable unit of the subject invention does not require mechanical means to elevate the material; nor does the material have to be elevated at all.

Also, the Scudder unit processes the material outside and above the trench. The processed material must be conveyed laterally to a point above the trench and then dropped vertically into the trench. The subject invention operates within the limits of the trench in that the screening member is in the trench, and it does not require conveying the material in any respect, as is done in Scudder.

Applicant's invention, as set forth in claim 1, is less complex than that of Scudder since no structure is needed to elevate the screening member and, more importantly, no conveyor is needed to convey the material to the screening member. Complexity requires greater initial start-up/fabrication costs, higher operating costs, the likelihood of mechanical

failure and demands greater skills from the operator and maintenance personnel. All of this is avoided with the subject invention.

Accordingly, main claim 1 recites a different, less complex and more advantageous structure than that of Scudder. The claim is patentable and should be allowed.

Claims 4-10 depend from claim 1 and recite further novel features of the invention. Attention is directed to claims 18 and 6-10 which call for the screening member to deposit the material in layers. Scudder does not teach or suggest this advantageous feature. In view of the allowability of claim 1, these dependent claims also are patentable and should be allowed.

Claims 1-3 and 10-17 are rejected over Rivard, U.S. 4,812,078 in view of Scudder.

The Rivard apparatus has plows that sweep excavated material into the trench for the purpose of backfilling the trench. But this is done after the utilities already have been protectively encased with "fine powdery material" (e.g., a foreign material such as sand) transported from a "receptacle". That is, Rivard has a separate container 40 to hold the powdery material that is dispensed to encase the conduit (see column 4, lines 39-50). The present invention has one or more plows that sweep excavated material from the trench wall onto the screening member in the trench, and the excavated material is processed by the screening member and used for the purpose of protectively encasing the utility.

Again, the present invention uses the excavated trench material to cover the utilities, whereas Rivard needs a separate supply of fine powder to encase (bury) the conduits. Rivard's plows only backfill an already encased conduit. The plow of the invention provides the material to accomplish the encasement.

The combination of Rivard with Scudder appears to be illogical. Rivard has no need for a screening member since he provides the separate supply of the fine powdery material to encase the utilities. Further, even if the combination is made, it does not meet the structural features of claim 1 discussed above, i.e., in the present invention the

screening member is in the trench and the plow sweeps the material onto the screening member. In Scudder, the screening member is elevated above the trench and a conveyor is needed.

Claim 11 refers to a vertical plate to support the walls of the trench. In Rivard, vertical plates extend to or above the top margin of the trench for the full length of the movable unit for the purpose of preventing any undesirable materials from falling onto at least one installed utility being covered by the fine powdery material. In the present invention, the top of the vertical plates slope downward, below the top margin of the trench, to the rear, parallel to and at, or just above, the screening member. This allows the collapse of the trench walls above the screening member, adding to the material available for processing by the screening member, while preventing any undesirable materials from falling below the screening member and onto the utilities prior to their encasement.

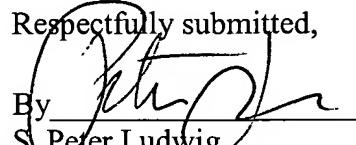
Accordingly, claim 1 patentably distinguishes over the combination of references. Claims 2 and 10-17 depend from claim 1 and recite further features of the invention. Therefore, these claims are also patentable and should be allowed.

New claims 18 and 19 have been added with claim 18 depending from claim 1 and claim 19 from claim 18. These claims recite further features of the screening member. Claim 6 and its dependent claims now depend from claim 18. In view of the allowability of claim 1, these claims also are patentable and should be allowed.

Prompt and favorable action is requested.

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